

What is claimed is:

1. A vehicle air conditioner comprising:

a casing having an air passage from which air blows out to a passenger compartment of a vehicle;

a carbon-dioxide-gas compression refrigeration cycle disposed in said casing, said refrigeration cycle including a compressor, a radiator disposed in said air passage and a evaporator disposed in said air passage;

an air heater, disposed in said air passage, for heating air that blows out from the air passage by heat generated by the vehicle; and

first means for circulating compressed carbon-dioxide-gas through the radiator if heat energy of said air heater is less than a prescribed capacity and is sufficient to heat the air that blows out to the passenger compartment.

2. The vehicle air conditioner as claimed in claim 1, further comprising a temperature sensor for detecting an outside temperature, wherein

said first means is operated when the outside temperature is in a prescribed temperature range.

3. The vehicle air conditioner as claimed in claim 1, further comprising a bypass passage bypassing said air heater and said radiator through which air blows to the passenger compartment and second means for controlling a ratio of an amount of the air to pass said air heater and the radiator to an amount of the air to flow through the bypass passage,

wherein said first means circulates compressed carbon-dioxide-gas

through said radiator if the ratio is larger than a prescribed value.